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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,298	02/09/2004	Seung-Mi Kang	P56973	8751
7590 Robert E. Bushnell 1522 K Street, N.W. Suite 300 Washington, DC 20005		02/20/2007	EXAMINER LIN, JASON K	
			ART UNIT 2609	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	02/20/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/773,298

Applicant(s)

KANG ET AL.

Examiner

Jason K. Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 8-11 and 13-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/09/2004, 10/27/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to application No. 10/773,298 filed on 02/09/2004. **Claims 1-20** are pending and have been examined.

Information Disclosure Statement

2. The information disclosure statement (IDS) filed on 02/09/2004 is considered.

The information disclosure statement (IDS) filed on 10/27/2006 is accepted but not considered because the document number for Balabanian et al. was not provided.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-4, 6, 7, 12, 17, 19, 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over ISO/IEC 13818-6 (First edition 1998-09-01) in view of JERDING et al. (2006/0206913).

Consider **claim 1**, ISO/IEC 13818-6 teaches a method for controlling network digital broadcasting service (P. xix [0. Introduction], 2nd paragraph, Described further in detail in Clause 4), comprising steps of:

directly requesting, at a client, a SRM (Session Resource Manager) for a session connection, and establishing a session by receiving a confirmation message for the session connection from the SRM ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 76 Step 1 teaches "the Client shall send ClientSessionSetUpRequest to the Network..." to establish a new session connection. P. 78 Steps 7-8 teaches the client receiving a ClientSessionSetUpConfirm message from the SRM establishing the session connection. As seen on Fig. 4-6, the client is directly sending and receiving messages from the SRM); and

directly requesting, at the client, the digital broadcasting server for a channel change, and changing a channel by receiving a confirmation message for the channel change from the digital broadcasting server (P. 492-495 teaches a client directly requesting a broadcast program from the SDB Server. A SDBProgramSelectRequest is generated by the client and sent to the SDB Server for requesting a channel change. A SDBProgramSelectConfirm from the SDB Server is received by the client allowing the client to receive the requested Broadcast Program).

ISO/IEC 13818-6 does not teach that the SRM (Session Resource Manager) can also reside at the digital broadcaster server.

In the same field of endeavor JERDING et al. teaches session setup and controlling video distribution between server and client.

JERDING et al. also teaches a SRM (Session Resource Manager) that resides at the digital broadcaster server (cable headend) (Fig. 2,

Paragraph 0037 teaches where both the MOD application server 19 and the digital network control system [DNCS, SRM] are both located at the cable television headend 11.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device in ISO/IEC 13818-6 to have the SRM at the cable headend as taught in JERDING et al. for the advantage of providing the cable service providers with greater control and manageability over the broadcasting infrastructure.

Consider **claim 2, as applied to claim 1 above**, ISO/IEC 13818-6 and JERDING et al. teaches receiving, at the client, a message for checking a status of the client from the digital broadcasting server, and directly delivering a confirmation message for checking the status of the client to the digital broadcasting server (P.90-91 teaches that the client can receive a ClientStatusIndication message sent from the SRM which requests information. The client in turn sends back a ClientStatusResponse containing the information that was requested.

Referring back to Table 4-16 on P.56, many different statusType fields can be used for specifying what type of status is requested including the status of the client. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 3, as applied to claim 1 above**, ISO/IEC 13818-6 teaches directly requesting, at the client, the digital broadcasting server for a session termination and terminating a session by receiving a confirmation message for the session termination from the digital broadcasting server ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 81-82 teaches a client initiating a release request. Step 1 teaches the client directly sending a ClientSessionReleaseRequest message to the SRM for releasing an existing session. Step 4-5 teaches receiving a ClientSessionReleaseConfirm message from the SRM terminating the session. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 4, as applied to claim 1 above**, ISO/IEC 13818-6 teaches directly requesting, at the digital broadcasting server, the client for a session termination and terminating a session by receiving a confirmation message for the session termination from the client (P. 87 – 88, step 2 teaches sending a ClientSessionReleaseIndication to the client for releasing an existing session. The SRM receives the

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ClientSessionReleaseResponse from the client and releases all the resources assigned to the session terminating the session for the client.

JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 6, as applied to claim 1 above**, ISO/IEC 13818-6 teaches wherein a protocol between the client and the digital broadcasting server is a TCP/IP (Transmission Control Protocol/Internet Protocol) (P. xxv teaches that the transport layer in Fig. 0-3 on P. xxiv may consist of any protocol including TCP over IP. P. 291 also teaches that Switched Digital Broadcast (SDB) Channel Change Protocol (CCP) can be carried on top of various protocols including IP where their constraints are further defined in clause 9, allowing for the use of TCP over IP).

Consider **claim 7, as applied to claim 1 above**, ISO/IEC 13818-6 teaches wherein a message for requesting the session connection is a SessionSetupRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a Reserved field, a Client ID field, and a Server ID field, (4.2.4.1 on P. 25-26, and Table 4-8) and the SessionSetupRequest message is transmitted from the client to the digital broadcasting server ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 76 Step 1 teaches "the Client shall send ClientSessionSetUpRequest to the Network..." to establish a new session

connection. As seen on Fig. 4-6, the client is sending and receiving messages from the SRM. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 12, as applied to claim 1 above**, ISO/IEC 13818-6 teaches wherein the confirmation message for confirming the session connection is a SessionSetupConfirm message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a response field, and a Server ID field (4.2.4.2 on P 26-27, and Table 4-9), and the SessionSetupConfirm message is transmitted from the digital broadcasting server to the client ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 78 Steps 7 and 8 teaches the SRM sending a ClientSessionSetUpConfirm message to the client. As seen on Fig. 4-6, the client is sending and receiving messages from the SRM. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 17**, ISO/IEC 13818-6 teaches a system controlling a network digital broadcasting service (P. xx Fig. 0-1, sP. xix [0. Introduction], 2nd paragraph, Described further in detail in Clause 4) comprises:

a client and a SRM (Session Resource Manager), the client directly requesting the SRM (Session Resource Manager) for a session

connection, and establishing a session by receiving a confirmation message for the session connection from the SRM (Session Resource Manager) ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 76 Step 1 teaches "the Client shall send ClientSessionSetUpRequest to the Network..." to establish a new session connection. P. 78 Steps 7-8 teaches the client receiving a ClientSessionSetUpConfirm message from the SRM establishing the session connection. As seen on Fig. 4-6, the client is directly sending and receiving messages from the SRM); and

the client directly requesting a program change from the digital broadcasting server and receiving a confirmation message from the digital broadcasting server, when the digital broadcasting server confirms the channel change (P. 492-495 teaches a client directly requesting a broadcast program from the SDB Server. A SDBProgramSelectRequest is generated by the client and sent to the SDB Server for requesting a channel change. A SDBProgramSelectConfirm from the SDB Server is received by the client allowing the client to receive the requested Broadcast Program).

ISO/IEC 13818-6 does not explicitly teach that the SRM (Session Resource Manager) can also reside at the digital broadcaster server.

In the same field of endeavor JERDING et al. teaches session setup and controlling video distribution between server and client.

JERDING et al. also teaches a SRM (Session Resource Manager) that resides at the digital broadcaster server (cable headend) (Fig. 2, Paragraph 0037 teaches where both the MOD application server 19 and the digital network control system [DNCS, SRM] are both located at the cable television headend 11.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device in ISO/IEC 13818-6 to have the SRM at the cable headend as taught in JERDING et al. for the advantage of providing the cable service providers with greater control and manageability over the broadcasting infrastructure.

Consider **claim 19, as applied to claim 17 above**, the ISO/IEC 13818-6 teaches the client directly requesting the digital broadcasting server for a session termination and terminating a session by receiving a confirmation message for the session termination from the digital broadcasting server ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 81-82 teaches a client initiating a release request. Step 1 teaches the client directly sending a ClientSessionReleaseRequest message to the SRM for releasing an existing session. Step 4-5 teaches receiving a ClientSessionReleaseConfirm message from the SRM terminating the session. JERDING et al. teaches that the SRM can be located at the

cable headend [digital broadcasting server]. As seen on Fig. 4-7, the client is directly sending and receiving messages from the SRM).

Consider **claim 20, as applied to claim 17 above**, the ISO/IEC 13818-6 teaches the digital broadcasting server directly requesting the client for a session termination and terminating a session by receiving a confirmation message for the session termination from the client (P. 87 – 88, step 2 teaches sending a ClientSessionReleaseIndication to the client for releasing an existing session. The SRM receives the ClientSessionReleaseResponse from the client and releases all the resources assigned to the session terminating the session for the client. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]. As seen on Fig. 4-12, the client is directly sending and receiving messages from the SRM).

4. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over ISO/IEC 13818-6 (First edition 1998-09-01) in view of JERDING et al. (2006/0206913), and further in view of Chapman (US 7,113,484).

Consider **claim 5, as applied to claim 1 above**, ISO/IEC 13818-6 teaches directly receiving, at the client, a session termination request from the digital broadcasting server (P. 99 teaches receiving a ClientSessionReleaseIndication from the SRM for releasing session [session termination]. As seen on Fig. 4-20, the client is directly sending and receiving messages from the SRM. JERDING et al. teaches that the

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SRM can be located at the cable headend [digital broadcasting server]),
and

ISO/IEC 13818-6 does not teach terminating a session if the client cannot transmit a response to the session termination request from the digital broadcasting server.

In the same field of endeavor Chapman et al. teaches a broadcasting system. Chapman et al. teaches terminating a session if the client cannot transmit a response to the session termination request from the digital broadcasting server (Col 11: lines 23-35 teach that if no response is received from the cable modem [client] the resources allocated to the session is de-allocated [terminated]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device in ISO/IEC 13818-6 and JERDING et al. to terminate a session [de-allocate resources] when no response is transmitted from the client as taught in Chapman et al. for the advantage of freeing up resources for other clients.

5. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over ISO/IEC 13818-6 (First edition 1998-09-01) in view of JERDING et al. (2006/0206913), and further in view of Yun (US 2007/0006254).

Consider **claim 18, as applied to claim 17 above**, ISO/IEC 13818-6 teaches the client receiving a message from the digital broadcasting server for checking a status of the client (P. 100 teaches receiving a ClientStatusIndication message from the SRM for requesting [checking] a

status of the client. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]), and directly delivering a client status confirmation message, indicative of the status of the client, to the digital broadcasting server (P. 100 teaches the client sending a ClientStatusResponse message directly to the SRM containing status data of the client. As seen on Fig. 4-21, the client is directly sending and receiving messages from the SRM. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

ISO/IEC 13818-6 does not teach the client periodically receiving a message from the digital broadcasting server for checking a status of the client.

In the same field of endeavor Yun teaches a cable broadcasting system. Yun also teaches the client periodically receiving a message from the digital broadcasting server for checking a status of the client (Paragraph 0090 teaches the cable head end transmitting the command [message] for periodically checking the operation state [status] of the set-top box [client]. The client [POD and set-top box] periodically receives these commands are sent periodically from the server to the client side).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device in ISO/IEC 13818-6 and JERDING et al. to have the client periodically receiver messages from the digital broadcasting server for checking a status of a client as taught in Yun for the advantage of providing the head

end [digital broadcasting server] information regarding the set-top box in realtime (See Yun, Paragraph 0073) and providing the head end with a more competitive edge (Paragraph 0035 – 0036).

Allowable Subject Matter

6. **Claims 8-11, 13-16** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The closest prior art teaches different session control messages comprising of the following fields, dsmccMessageHeader(), session ID, reserved, clientID, serverID, response, broadcast programId, reason, statusType, resourceNumber, and resourceStatus.

The closest prior art does not teach or fairly suggest client ID fields in channel change request/confirm, session termination request/confirm, client status request/confirm messages. STB status field is also not taught or fairly suggested for channel change request.

Cited Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Darleen Sadoski discloses two tier client to server architecture in (Two Tier Software Architecture).

Darleen Sadoski discloses three tier client/application server/server architecture in (Three Tier Software Architectures).

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason K. Lin whose telephone number is (571)270-1446. The examiner can normally be reached on Mon-Fri, 7:30AM-5:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason Lin

2/1/2007


PATRICK N. EDOUARD
SUPERVISOR/PATENT EXAMINER